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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,551	09/27/2001	Hiroki Hachiyama	60188-099	8913

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EXAMINER
THOMPSON, JAMES A

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

H·A

	Application No.	Applicant(s)
Office Action Summary	09/963,551	HACHIYAMA ET AL.
	Examiner	Art Unit
	James A. Thompson	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 August 2005</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>2-9</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>21 September 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☒ All b)☐ Some * c)☐ None of:
1.☒ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 7-05)   Office Action Summary   Part of Paper No./Mail Date 20050918

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments, see page 5, lines 2-7, filed 05
August 2005, with respect to the rejections of claim 1 under 35
USC §112, 2nd paragraph and 35 USC §102(b) have been fully
considered and are persuasive. The rejections of claim 1 under
35 USC §112, 2nd paragraph and 35 USC §102(b) listed in items 2-5
of the previous office action, dated 26 April 2005, have been
withdrawn.

2.   Applicant's arguments filed 05 August 2005 have been fully
considered but they are not persuasive.

   Regarding page 5, line 8 to page 6, line 2: *Applicant
alleges* that Kuchta (US Patent 5,164,831) does not teach "a
series of images which are captured consecutively by the imager
is transferred from the image memory to the storage medium while
the series of images is presented by the display", as presently
recited in claim 2, and similarly recited in now canceled claim
1. *Examiner responds that,* in attempting to support said
allegation, Applicant relies on the teachings of Kuchta that
discuss the thumbnail images, and the series of captured images
themselves. Examiner has shown that Kuchta teaches the above
limitation on lines 4-8 of the arguments regarding claim 1,
which is located on page 4 of said previous office action. The
portions Examiner cites (column 3, lines 56-58; and column 4,
lines 5-8 and lines 47-50 of Kuchta) specifically state:

> "The digital signals are applied to an image
> buffer 18, which is a random access memory (RAM) with
> storage capacity for a plurality of digital still
> images." [column 3, lines 56-58 of Kuchta]

"The processor 22 applies a compression algorithm
to the digital image signals, and sends the compressed
signals to a removable memory card 24 via a connector
26." [column 4, lines 5-8 of Kuchta]
"For this reason, the image buffer 18 shown in
FIG. 1 provides for storage of a plurality of images,
in effect allowing a series of images to 'stack up' at
video rates." [column 4, lines 47-50 of Kuchta]

Thus, the sequence of captured images is stored in random
access memory and displays in sequence. Therefore, the series
of image which are captured consecutively by the imager are
transferred from the image memory (namely, the memory of the
image capturing device) to the storage medium (namely, the
random access memory) while the series of image is presented by
the display (stored in random access memory while the display is
display the portion of the sequence of images that has queued up
in the memory to be displayed). Thus, Kuchta fully teaches the
limitations recited in the claims. Applicant is respectfully
reminded that, although the claims are interpreted in light of
the specification, limitations from the specification are not
read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26
USPQ2d 1057 (Fed. Cir. 1993).

Additionally, the series of captured images are later
stored in compressed format in the same order (figure 2B and
column 4, lines 58-65 of Kuchta) while being displayed by the
display (column 5, lines 29-35 of Kuchta).

Regarding page 6, line 3 to page 7, line 9: *Applicant
alleges* that the image data taught by Kuchta does not correspond
to a series of images captured consecutively. Capturing images
consecutively simply means that one image is captured after
another, which by itself is quite trivial in the art.
Consecutive image capture does not require a continuous shooting

camera. Applicant's description of the specific manner of sequential image capture taught in Applicant's specification is not recited in the claims. Again, Applicant is respectfully reminded that, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   Claims 5-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 5 recites that "the image memory outputs the compressed image data corresponding to the series of images to *both of the compressor/expander and the interface*" [emphasis added]. This recitation is not enabled by the disclosure for two main reasons. Firstly, the interface is the device by which the image memory interacts with the rest of the image processor. The memory itself only stores the data in the locations accessed by the interface. The memory is essentially passive and is acted upon by said interface. Thus, the image memory itself

cannot output anything. It is the interface which outputs the image data. In a technical recitation, the language "the memory outputs" is sometimes used, but it is understood that the *interface* of the memory is doing the actual outputting and saying that the memory outputs is simply a shorthand way of saying what is understood. However, in claim 5 the distinction between the interface and the memory is clearly brought out.

Secondly, Applicant's disclosure does not provide that the memory outputs the image data to both the compressor/expander *and* the interface. In fact, in figure 1 of the present application, it is clearly shown that the image data present in the image memory is first output through the memory interface and *then* provided to the compressor/expander. Thus, claim 5 is not enabled by Applicant's disclosure.

Therefore, for the purposes of examining the claims over the prior art, Examiner will interpret the language of claim 5 to mean that the compressed image data in the image memory is output through the interface to the compressor/expander, as shown in figure 1 of the present application.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 2-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kuchta (US Patent 5,164,831).

Regarding claim 2: Kuchta discloses an image processor
(figures 1A-1B of Kuchta) comprising an imager (figure 1A(10) of
Kuchta) for capturing an image of an object (column 3, lines 32-
34 and lines 38-42 of Kuchta) and outputting image data
representing the image captured (column 3, lines 47-55 of
Kuchta); a compressor/expander (figure 1B("Image Compression")
of Kuchta) which receives and compresses the image data and then
outputs the compressed image data (column 4, lines 1-5 and lines
53-55 of Kuchta) or which receives and expands the compressed
image data and then outputs the expanded image data (column 7,
lines 20-24 of Kuchta); an image memory (figure 1A(24) of
Kuchta) for storing the compressed image data thereon (column 4,
lines 5-8 and lines 53-58 of Kuchta); a display memory (figure
1A(18) of Kuchta) for storing the expanded image data thereon
(column 4, lines 34-38 and lines 47-50 of Kuchta); a display
(figure 1A(30) of Kuchta) for presenting thereon the expanded
image data that has been once stored on the display memory
(column 4, lines 65-68 and column 7, lines 30-33 of Kuchta); and
an interface (figure 1A(26) of Kuchta) for recording the
compressed image data, which has once been stored on the image
memory, on a storage medium (column 3, lines 56-58 of Kuchta),
wherein while image data corresponding to a series of images
which are captured consecutively by the imager is transferred
from the image memory to the storage medium (figure 1(18) and
column 4, lines 47-50 of Kuchta) while the series of images is
presented on the display (column 4, lines 53-58 and lines 66-68
of Kuchta). The digital images are allowed to "stack up" while
being stored in the display memory in the order in which the
images are captured (figure 1A("Frame 1,2,3"); column 4, lines
34-38 and lines 47-50 of Kuchta) and are later stored in

compressed format in the same order (figure 2B and column 4, lines 58-65 of Kuchta) while being displayed by the display (column 5, lines 29-35 of Kuchta).

Regarding claim 3: Kuchta discloses that the compressor/ expander produces a reduced-size image for each said image captured (column 4, lines 53-55 of Kuchta) and compresses the reduced-size image to obtain and output the compressed image data (column 4, lines 56-58 and column 5, lines 29-31 of Kuchta), and that the compressor/expander expands the compressed image data (column 7, lines 30-34 of Kuchta), representing the series of images (column 4, lines 47-50 of Kuchta), and then outputs the expanded image data to the display memory so that the reduced-size versions of the series of images can be added one by one on the same display (column 4, line 65 to column 5, line 6 of Kuchta) in the order in which the images have been captured (figure 2B; column 6, line 27-31; and column 7, lines 47-52 of Kuchta) so as to present a plurality of images on the display (column 7, lines 47-52 of Kuchta). Since the reduced- resolution ("thumbnail") image is taken from the DCT before being saved with the compressed high-resolution image data (column 5, lines 29-35 of Kuchta), the reduced-resolution data is compressed.

Regarding claim 4: Kuchta discloses that the compressor/ expander expands the compressed image data (column 7, lines 30- 34 of Kuchta), representing each of the series of images which is being transferred to the storage medium (figure 2B and column 4, lines 47-50 of Kuchta), and then outputs the expanded image data to the display memory so that each said image being transferred can be presented on the display (column 7, lines 47- 52 of Kuchta).

Regarding claim 5: Kuchta discloses that the image memory outputs the compressed image data corresponding to the series of images to both of the compressor/expander and the interface (column 7, lines 8-13 of Kuchta). Applicant is respectfully reminded of the interpretation of the language of claim 5 presented above in item 4.

Kuchta further discloses that the compressor/expander expands the compressed image data from the image memory (column 7, lines 8-13 of Kuchta) and outputs the expanded image data to the display memory so that the series of image is presented on the display (column 4, lines 65-68 and column 7, lines 30-33 of Kuchta) sequentially in an order in which the images have been captured (column 4, lines 34-38 and lines 47-50 of Kuchta); and that the interface records the compressed image data on the storage medium (figure 2B and column 4, lines 58-65 of Kuchta) while the series of images is presented by the display (column 5, lines 29-35 of Kuchta).

Regarding claim 6: Kuchta discloses that the display presents the series of images while the compressed image data corresponding to the series of images is stored on the storage medium (column 5, lines 29-35 of Kuchta).

Regarding claim 8: Kuchta discloses successively receiving image data corresponding to a series of images captured consecutively by an imager (column 4, lines 47-50 of Kuchta); successively compressing the received image data as compressed image data by a compressor/expander (column 4, lines 1-5 of Kuchta); temporarily storing the compressed image data on an image memory (column 4, lines 5-8 and lines 53-58 of Kuchta); successively expanding the compressed image data by the compressor/expander (column 7, lines 20-24 of Kuchta);

successively storing the image data expanded by the compressor/
expander on a display memory (column 4, lines 34-38 and lines
47-50 of Kuchta); and storing the compressed image data
successively on a storage medium while the series of images is
presented on a display based on the image data stored on the
display memory (column 5, lines 29-35 of Kuchta).

Claim Rejections - 35 USC § 103

7.   The following is a quotation of 35 U.S.C. 103(a) which
forms the basis for all obviousness rejections set forth in this
Office action:

> (a) A patent may not be obtained though the invention is not
> identically disclosed or described as set forth in section 102 of this
> title, if the differences between the subject matter sought to be
> patented and the prior art are such that the subject matter as a whole
> would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the
> invention was made.

8.   Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Kuchta (US Patent 5,164,831) in view of
Anderson (US Patent 6,020,920).

Regarding claims 7 and 9: Kuchta does not disclose
expressly that the image memory and display memory are
implemented as a single memory.

Anderson discloses DRAM memory (figure 3(346) of Anderson)
which is a contiguous block of memory used for various storing
functions (column 4, lines 50-53 of Anderson) including image
data for display (column 4, lines 52-55 of Anderson).

Kuchta and Anderson are combinable because they are from
the same field of endeavor, namely the control of digital image
data processing, display and storage, including the use and
display of thumbnail image data. At the time of the invention,

it would have been obvious to a person of ordinary skill in the
art to use a single dynamic memory for both storing image data
and displaying image data, as taught by Anderson. Thus, the
image memory and display memory taught by Kuchta are implemented
as a single memory, as taught by Anderson. The suggestion for
doing so would have been that DRAM is contiguous, dynamically
addressable, and selectively allocatable (column 4, lines 50-55
of Anderson). Thus, DRAM can serve all of the memory usage
needs in an image data display system. Therefore, it would have
been obvious to combine Anderson with Kuchta to obtain the
invention as specified in claims 7 and 9.

Conclusion

9.   The prior art made of record and not relied upon is
considered pertinent to applicant's disclosure.

Eric C. Anderson, US Patent 5,933,137, 03 August 1999.

10.   Applicant's amendment necessitated the new ground(s) of
rejection presented in this Office action. Accordingly, **THIS
ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is
reminded of the extension of time policy as set forth in 37
CFR 1.136(a).

A shortened statutory period for reply to this final action
is set to expire THREE MONTHS from the mailing date of this
action. In the event a first reply is filed within TWO MONTHS
of the mailing date of this final action and the advisory action
is not mailed until after the end of the THREE-MONTH shortened
statutory period, then the shortened statutory period will
expire on the date the advisory action is mailed, and any
extension fee pursuant to 37 CFR 1.136(a) will be calculated

from the mailing date of the advisory action. In no event,
however, will the statutory period for reply expire later than
SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to James A.
Thompson whose telephone number is 571-272-7441. The examiner
can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are
unsuccessful, the examiner's supervisor, David K. Moore can be
reached on 571-272-7437. The fax phone number for the
organization where this application or proceeding is assigned is
571-273-8300.

Information regarding the status of an application may be
obtained from the Patent Application Information Retrieval
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see http://pair-direct.uspto.gov. Should you have questions on
access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

James A. Thompson
Examiner
Art Unit 2624

18 September 2005

THOMAS D
LEE
PRIMARY EXAMINER